

# **SYSTEM AND METHOD FOR ROUTING NETWORK TRAFFIC THROUGH WEIGHTED ZONES**

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## **ABSTRACT**

A system and method for routing between nodes in a network or subnet. An end node is associated with multiple identifiers for routing purposes, and therefore multiple paths may exist between two end nodes. Network nodes and components (e.g., switches) are grouped into fault zones. Each physical enclosure of network entities may comprise a separate fault zone. For each zone through which a path between two nodes passes, a weight is calculated equal to the number of paths between the nodes that traverse that zone. Path weights are calculated for each path between the nodes, equal to the sum of the weights of each zone in the path. To improve network fault tolerance, new paths may be designed to avoid fault zones and existing paths with high weights. Instead of fault zones, other criteria may be used to assign weights, such as mean time between failures (MTBF), cost, speed, etc.

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